

electrodes onto which probe molecules complementary to the nucleic acid fragments are fixed, so that hybridization between the nucleic acid fragments having electroconductive labels and the probe molecules on the electroconductive microarray can proceed to form hybrid structures on the electrodes;

applying to the electrode an electric potential corresponding to the oxidation-reduction potential of the former electroconductive label and detecting on the electrode an electric current flowing along the hybrid structure;

and comparing the electric current detected in the former detecting procedure and the electric current detected in the latter detecting procedure to obtain a ratio of the content of the nucleic acid fragments in each sample.